

CITY OF LAS VEGAS



Master Plan Recreation Trails Element

Adopted
January 16, 2002
Revised
January 20, 2005

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Recreation Trails Element of the City of Las Vegas Master Plan

Prepared by the
Comprehensive Planning Division
of the
Planning and Development Department

Adopted January 16, 2002

Revised January 20, 2005

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Recreation Trails Element

Executive Summary

The Recreation Trails Element, an element of The Las Vegas 2020 Master Plan, establishes standards, guidelines, objectives, policies and priorities for the location, development and maintenance of recreation trails in Las Vegas. This plan by its adoption will be part of the Master Plan.

A companion plan entitled the Transportation Trails Element establishes provisions for transportation trails. Although both plans address the location, development and maintenance of trails within the city, there is a major distinction between the two in how trails are owned and maintained. Assembly Bill No. 63 was enacted by the 71st Legislature and is now effective. The Bill stipulates that any “recreation” trail required of a development must be owned and maintained by the City. Previous to the enactment of A.B. 63, the City required a developer to either construct a recreation trail or to reserve the space for a recreation trail that would be constructed at a later date. The responsibility for ownership and maintenance of a recreation trail was placed on a homeowners associations or on an individual property owner whose property the trail crossed. This distinction required that the City prepare separate plans for each type of trail.

Recreation trails discussed in this element are for the most part identified as equestrian trails. Three major equestrian trail segments are proposed to be included in this plan, including: (1) the Bradley Road trail, a trail that extends along the east side of Bradley Road, from Centennial Parkway to Grand Teton Drive; (2) the Grand Teton Trail, a trail that extends along the north side of Grand Teton Drive, from Decatur Boulevard to the eventual proposed location of Puli Drive; and (3) the Durango Drive Trail, a trail that extends along the west side of Durango Drive, from Grand Teton Drive to Horse Drive, along the south side of Horse Drive to El Capitan Way, and along the west side of El Capitan Way to the eventual proposed location of Moccasin Road. Other minor trail segments interconnect these trails with Floyd Lamb Park, a proposed equestrian park east of Floyd Lamb Park, and destinations southwest of the Centennial Hills Sector.

These three trail segments account for a total of 11.5 miles of equestrian trails with 7.8 miles that would have to be owned and maintained by the City. It is estimated that the 7.8 miles of these equestrian trails would cost the City a total estimated annual maintenance cost of approximately \$37,000.

Executive Summary



The Recreation Trails Element has provisions for two types of trails: (1) recreation trails and (2) multi-use, recreation trails. The guidelines and standards for each type of trail are addressed in this document.

Based on the objectives and recommendations of the Recreation Trails Element, trails should be provided in conjunction with development by the developer. In addition, the ownership, maintenance and repair or replacement of the trails and trail segments should be as follows:

- That the design standards presented in this plan control, unless it is demonstrated by substantial evidence that there is a more suitable alternative;
- That the Manual on Uniform Traffic Control Devices (MUTCD) be used for signage and route designations where the standards of this plan do not apply to specific situations;
- That a signage program be established to systematically install signs over a period of time to designate recreation trail routes;
- That existing and future parks be integrated with the trails system and provide appropriate trail heads with the proper conveniences;
- That the City coordinate the planning, development and construction of recreation trails with other Las Vegas Valley entities;
- That the areas along the edges of hard-lined flood control facilities and along natural drainage courses be used, where appropriate, as areas for trails with landscaping and other features which enhance the appearance of these areas; and
- That public education in the use of recreation trails be promoted.

Since most trails within new developments are constructed by developers, the City should expend its limited resources in developing trails elsewhere. Consequently, the City should focus on constructing trail segments in existing and future development areas that are necessary to complete major sections of the trails system between developments. This may entail acquiring the necessary right-of-way and constructing some segments across undeveloped parcels and retrofitting other trail segments on development parcels.



Recreation Trails Element

INTRODUCTION

PURPOSE

This element of The Las Vegas 2020 Master Plan (“Master Plan”) establishes standards, guidelines, objectives, policies and priorities for the location, development and maintenance of recreation trails in Las Vegas. Recreation trails are one of two major types of trails that include transportation trails. Transportation trails are addressed in the Transportation Trails Element. These two types of trails have many forms, including equestrian trails and multi-use on-street and off-street trails, that are defined in the list of terms in this document. This plan by its adoption will be part of the Recreation Element of the Master Plan which also addresses parks, recreation and open space (see Master Plan Parks Element adopted as part of the Master Plan on March 15, 2000).

TRAIL BENEFITS

The National Park Service’s Rivers, Trails, and Conservation Assistance Program (Rivers & Trails) and the Rail-to-Trails Conservancy are two of the largest organizations dedicated to trails. Studies by these organizations and others have found that recreation trails benefit the community in the following ways:

- Contribute to the conservation of natural resources
- Provide a community recreation resource
- Promote health and fitness
- Contribute to the preservation of aesthetic values
- Enhance economic opportunities
- Serve as a buffer

Rails-to-Trails Conservancy is a 13-year-old nonprofit organization dedicated to enriching America’s communities and countryside by creating a nationwide network of public trails from former rail lines and connecting corridors. The Rivers, Trails, and Conservation Assistance Program (Rivers & Trails) serves as a community resource of the National Park Service. It provides expertise and valuable on-the-ground technical assistance from strategic consultation and partnership development to service as a liaison with other government agencies. These two agencies conducted an extensive study to



*Bradley Road Trail, Lynbrook
Master Planned Community*

examine the benefits and impacts of trails, the first to systematically examine both the trail users and nearby property owners of the same trails. The results of the study are reported in a document entitled *The Impacts of Rail-Trails* published in July 1992.

As reported in the study's Findings, recreation trails have a positive effect for reasons of health and fitness, recreation opportunities, the aesthetic beauty of the trail system, and added open space.

Important to the community's viability and enhancement of economic opportunities is the relationship to the community's quality of life. Recreation trails provide a lifestyle amenity that increases the desirability of Las Vegas as a place to live. Quality of life amenities are important attributes businesses and industries look for in making location decisions.

Trails also provide the benefit of buffers between potentially incompatible land uses. As a transition, trails with landscaped corridors provide separation in the form of open space.

ENABLING LEGISLATION

Sections 278.150 through Section 278.230 of the *Nevada Revised Statutes* contain the enabling legislation for the development and adoption of a master plan. Section 278.160 lists the specific elements of a master plan that may be addressed, including a "recreation plan." Subsection (j) states that a recreation plan is to show "...a comprehensive system of recreation areas, including without limitation natural reservations, parks, parkways, trails, reserved riverbank strips, beaches, playgrounds and other recreation areas, including, when practicable, the locations and proposed development thereof."

The City has an adopted master plan which is referred to as the City of Las Vegas General Plan ("General Plan"). The Las Vegas 2020 Master Plan which replaces parts of the General Plan was adopted in September of 2000. Both plans constitute a master plan as referenced in the *Nevada Revised Statutes* and is discussed in the following sections.

Section 278.4787 of the *Nevada Revised Statutes* addresses the maintenance of trails. Subsection 5 more specifically states:

"If the governing body requires an owner of land to dedicate a tract of land as a trail identified in the recreation plan of the governing body adopted pursuant to paragraph (j) of subsection 1 of NRS 278.160, the governing body shall:

(a) Accept ownership of the tract; and

(b) Assume the maintenance of the tract and any other improvement located on the land . . . "



In Title 18 of the Las Vegas Municipal Code, trails are defined as “public improvements.” Subsection 18.14.010 stipulates: “The subdivider is responsible for the construction of all public improvements and for any private improvements associated with the parcel map or subdivision that may be required by the City.” Other sections of this title provide for landscaping plans along street corridors and the scheduling of improvements. Consequently, recreation trails required by the City will be constructed by a developer and dedicated to the City to be owned and maintained by the City. Another agency or group, however, may choose to assume the responsibility to own and maintain a recreation trail that otherwise would have been required by the City.

CITY OF LAS VEGAS GENERAL PLAN

The City of Las Vegas General Plan (“General Plan”) was adopted April 1, 1992 and updated December 7, 1994. The General Plan contains a chapter on leisure and cultural services that includes recommendations for trails, including recreation trails. These recommendations pertain to equestrian trails in the northwest part of the community, north of Cheyenne Avenue. Section 3G states:

Recreation trails can transform leisure and cultural facilities into a leisure and cultural “system.” For example, the .4 system (sic) might enable a bicyclist or a pedestrian to go from the residential area that they live in to a local or regional park facility and then to another park facility via a secure trail. In the Northwest, horse keeping and horseback riding are very popular due to the rural character of the area and the larger lots where horses are permitted by zoning. As a result of these desires and concerns, it was proposed that the City establish a recreation trail system.

A portion of the 1992 General Plan was amended on December 18, 1996 to include the Centennial Hills Sector Plan (previously known as the Northwest Sector Plan) that was later updated in 1999. . . .At that time, several agencies, interest groups and homeowners associations met with City staff to revisit trail issues. Based on these discussions, amendments to the Centennial Hills Sector Plan were prepared and adopted by the City that recommended various locations for equestrian trails in the northwest part of the community. The location of these trails is illustrated on Map #1 (also referenced as Map #7 in the Centennial Hills Sector Plan).



*Recreation Trail
along El Capitan in the
northwest*

METHODOLOGY

To establish a recreation trails system, several components must be addressed, including definitions and standards; criteria and objectives; an assessment of anticipated needs; and an implementation strategy for developing the trails system.

For trails to be functional, they should meet the design standards of the National Recreation and Park Association (NRPA) and reflect the local area's experience with existing trails. An implementation strategy for establishing a trails system identifies the funding sources and organizational changes necessary to construct and maintain the trails system for those portions not constructed as part of development.

PLANNING PROCESS

The planning process was initiated with a studio or charrette held on August 11, 1999. Staff from several departments met to discuss goals and objectives for a trails plan, addressing applicable standards and deficiencies in the present system. The planning process eventually culminated in the development of two trails plans: the Recreation Trails Element and the Transportation Trails Element.

Considerable input was provided by a large number of groups and persons during the development of a trails plan. A technical Advisory Committee (TAC), composed of various staff members from several departments, was formed to provide input primarily at the earlier stages of the plans development.

Numerous neighborhood meetings were also initially held to derive input. These meetings were located in the following places on the dates noted:

- Lied Middle School, 9/7/99
- Rafael Rivera Community Center, 9/8/99
- Johnson Middle School, 9/9/99
- West Las Vegas Arts Center, 9/14/99
- West Charleston Library, 9/23/99
- Rafael Rivera Community Center, 11/9/99

After a draft of a trails plan was prepared, the draft was mailed out on February 1, 2001 to key persons and organizations for input on the draft prior to February 16. Numerous comments were received and incorporated into the draft. The period for review was extended to May 18, 2001 for those persons who did not respond. Additional comments were addressed in a final draft of a plan.

After the final draft of a trails plan was completed, additional neighborhood meetings, one in each ward, were held to derive input. These meeting were located in the following places on the dates noted:



Map No. 1

City of Las Vegas

CENTENNIAL HILLS SECTOR
Existing and Proposed
Trail Alignments

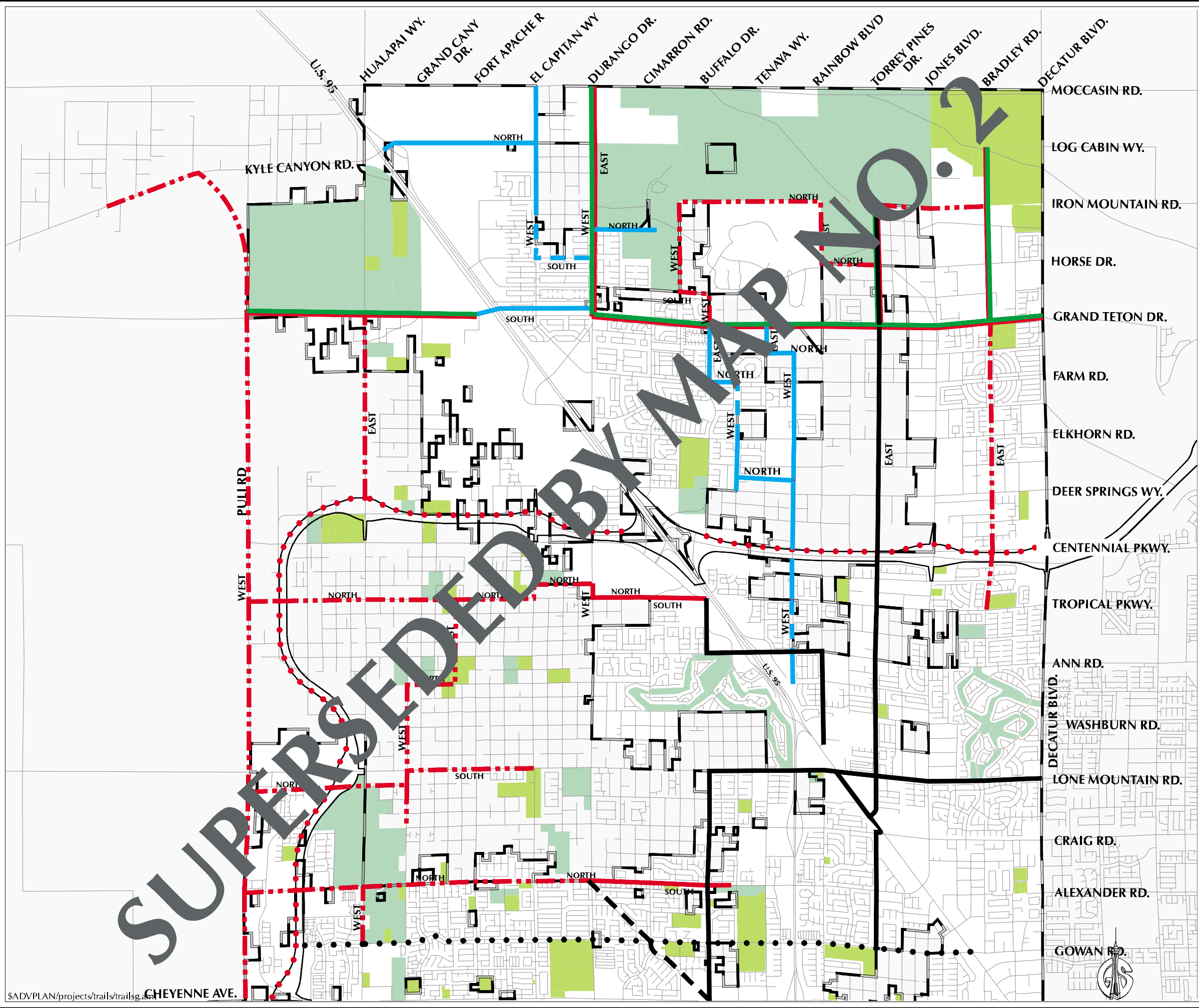
- EXISTING AND PROPOSED PARK, RECREATION, AND OPEN SPACE
- EXISTING AND PROPOSED PUBLIC FACILITY
- PROPOSED BELTWAY TRAIL SYSTEM BY CLARK COUNTY
- TRAIL ALIGNMENTS - MULTI-USE (NON-EQUESTRIAN) (20 FT.)
- EXISTING TRAIL ALIGNMENTS - MULTI-USE (25 FT.)
- PROPOSED TRAIL ALIGNMENTS - MULTI-USE (25 FT.)
- PROPOSED TRAIL ALIGNMENTS - MULTI-USE (30 FT.)
- TRAIL ALIGNMENTS - EQUESTRIAN ONLY (20 FT.)
- TRAIL ALIGNMENTS - RTC BIKE ROUTE
- PROPOSED CITY OF LAS VEGAS BIKE ROUTES
- TRAIL ALIGNMENTS - TRANSMISSION CORRIDOR
- PROPOSED BELTWAY ALIGNMENT (RIGHT OF WAY)

- NOTES:
- Trail corridors (permanent) are to be located outside of public street right-of-ways and are typically located adjacent to street corridors. 5 feet of the public street right-of-way may be used as a part of the total width as required above, if public sidewalk is not to be built at the back of curb.
 - Use of unimproved right-of-way areas as temporary trail corridors is acceptable until the unimproved right-of-way is utilized for another purpose.
 - Trail corridors are public-use, multi-modal facilities including non-equestrian and equestrian users (unless otherwise noted in the legend above). Non-equestrian users are non-motorized and include: bikers, walkers, joggers, skaters, and physically challenged persons.

SOURCE: The Departments of Public Works and Parks & Leisure Activities

PLANNING & DEVELOPMENT
CITY OF LAS VEGAS
Development Services Center

Plotted: December 16, 2002
GIS maps are normally produced only to meet the needs of the City. Due to continuous development activity this map is for reference only.
Geographic Information System
Comprehensive Planning
702-229-6022



BACK OF MAP



- Ruthe Deskin Elementary School, 5/14/01 (Ward 4)
- O.K. Adcock Elementary School, 5/15/01 (Ward 1)
- Oran K. Gragson Elementary School, 5/16/01 (Ward 3)
- M.J. Christensen Elementary School, 5/17/01 (Ward 2)
- West Las Vegas Arts Center, 5/21/01 (Ward 5)
- Betsy Rhodes Elementary School, 5/23/01 (Ward 6)

Prior to each meeting, all registered neighborhood associations were notified by mail and an advertisement was placed in the Las Vegas Review-Journal.

The final draft of a trails plan resulted in the development of two plans: one entitled the Recreation Trails Element for recreation trails and the other entitled the Transportation Trails Element for transportation trails. After adoption of the two plans by the Planning Commission on October 4, 2001, they were presented to the Southern Nevada Regional Planning Coalition for review and comment. The final step in the planning process is the endorsement of the two plans by the City Council.

TERMS

Terms used in this plan document are for the most part based on definitions of the National Recreation and Park Association (NRPA).

Trail: A designated route for persons driving or riding non-motorized vehicles, for pedestrians, and for other trail users. There are two major types of trails: recreation trails and transportation trails.

Trail, equestrian: A recreation trail designed and intended strictly for equestrians.

Trail, multi-use transportation: A transportation trail intended to be used and shared by bicyclists and persons on other non-motorized vehicles and for pedestrians.

Trail, multi-use, equestrian: A multi-use transportation trail combined with an equestrian trail.

Trail, recreation: A trail primarily intended to be used for recreation purposes. A recreation trail may be characterized as a path which begins and ends in approximately the same locality, such as in a park or subdivision; it may constitute a path that is incorporated in a cultural or societal experience; or it may provide access to a destination that is generally oriented for recreation purposes.

Trail, transportation: A trail intended to be used for transportation purposes. A transportation trail may be characterized as a trail that provides access from one part of the community to another.



*Recreation Trail
Highway Underpass Tunnel*

EXISTING TRAILS

LOCATION AND INVENTORY

Three major trail routes are included in this Element as follows:

- The Durango Drive Trail, a trail along Horse Drive from Durango Drive to El Capitan Way and from Horse Drive north. Most of the 2.5 mile long Durango Drive Trail has already been constructed, with 0.9 miles of the trail yet to be constructed that would have to be owned and maintained by the City.
- The Grand Teton Drive Trail, a trail that extends along the north side of Grand Teton Drive from Decatur Boulevard to the eventual proposed location of Puli Drive. The Grand Teton Drive Trail is approximately seven miles long. There are 5.9 miles of this trail that would have to be owned and maintained by the City after it is constructed.
- The Bradley Road Trail, a trail that extends from Centennial Parkway to Grand Teton Drive. The Bradley Road Trail is approximately two miles long of which one mile has been constructed or will be constructed with ensuing development. Approximately one mile of this trail would be owned and maintained by the City.

These three trail segments account for a total of 11.5 miles of equestrian trails with 7.8 miles that would have to be owned and maintained by the City.

EXISTING USAGE

Due to the very small amount of existing trails and the poor accessibility to those that do exist, no counts of usage have been made. As more trails are constructed, accurate counts can be made.

TRAIL OBJECTIVES AND CRITERIA

To formulate objectives and criteria for the establishment of a recreation trails system and to determine appropriate locations for trail links based upon these objectives and criteria, views were solicited from a number of different sources. A technical advisory committee composed of members of the City staff and an advisory committee composed of persons from various agencies with an interest in trails met on several occasions to exchange views.

OBJECTIVES AND CRITERIA

- That the design standards presented in this plan control, unless it is demonstrated by substantial evidence that there is a more suitable alternative;
- That the Manual on Uniform Traffic Control Devices (MUTCD) be used for signage and route designations where the standards of this plan do not apply to specific situations;
- That a signage program be established to systematically install signs over a period of time to designate recreation trail routes;
- That existing and future parks be integrated with the trails system and provide appropriate trail heads with the proper conveniences;
- That the City coordinate the planning, development and construction of recreation trails with other Las Vegas Valley entities.
- That the areas along the edges of hard-lined flood control facilities and along natural drainage courses be used, where appropriate, as areas for trails with landscaping and other features which enhance the appearance of these areas.
- That public education in the use of recreation trails be promoted.



Recreation trails with features associated with their corridors

TRAIL CLASSIFICATIONS AND STANDARDS

The Recreation Trails Element provides standards and guidelines for the establishment of recreation trails. The guidelines and standards for this type of trail are as follows.

EQUESTRIAN TRAILS

Equestrian trails have special requirements quite different from non-equestrian trails. Horses need a trail that is wide enough for a horse to turn around and a type of path that has a soft surface. When combined with a non-equestrian trails, they should be separated from pedestrians and other users for the protection of the non-equestrians as well as the equestrians.

Exhibit #1 shows the design for an equestrian trail along a street. The trail width is 20 feet. A minimum 10-foot wide bi-directional path is shown located between the lot lines and the five-foot sidewalk, with an intervening five-foot high fence between trail and sidewalk. The equestrian path is shown on publicly owned land. The sidewalk and landscape corridor are shown as a common lot.

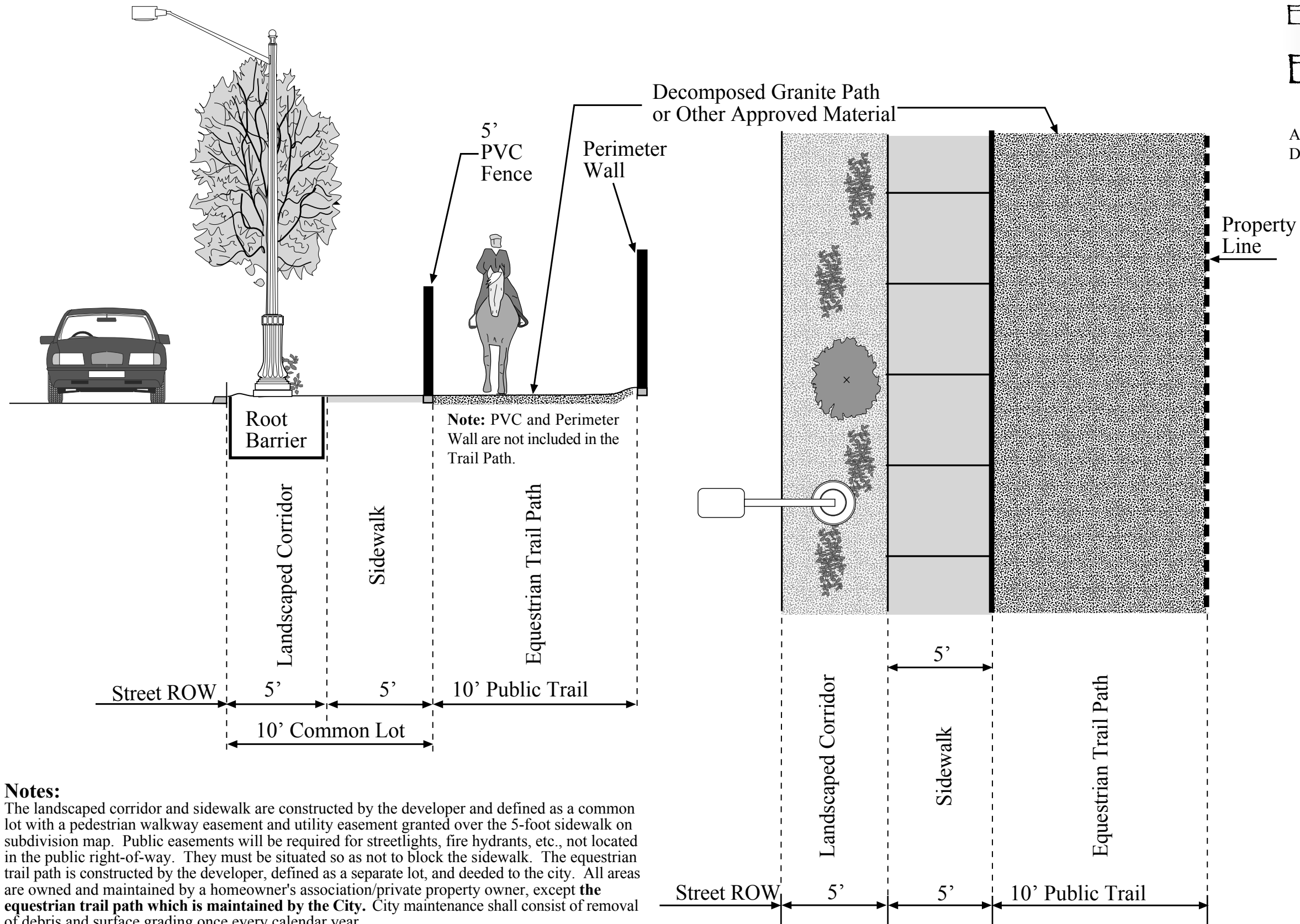
The fence separating the path and sidewalk should consist of a rigid polyvinyl chloride (PVC) resin compound with a high level of titanium dioxide pigment throughout the fence material for long term ultraviolet light resistance. The fence, to be a minimum of five feet in height, should not be constructed to withstand the force of an unrestrained horse that could cause injury to the horse and rider but serve as a visual barrier to the horse to refrain from darting toward the sidewalk when startled.

In instances where existing trail and trail path widths and locations are not consistent with the standards located in the Recreation Trails Element, transition from the existing width and locations to those required herein are to be made at street intersections, at other places where there is an interruption in the trail continuity, or to be made gradually such that the trail meanders.

The trail path should consist of “chat,” crushed granite with a high clay and/or sand content, or similar surface material that will not injure the horses’ hooves. Chat, a limestone product, hardens when water is applied and, therefore, stays in place better than crushed granite. It only comes in a gray color, but it costs about \$17.50 per ton (140 square feet by two inches deep) as compared to crushed granite that costs \$30 to \$35 per ton with the same coverage. The latter comes in Mojave gold, palomino, and different shades of red. The reds tend to show tracks more than the other two colors.

Exhibit 1 Equestrian Trail

Approved by City Council
December 1, 2004



Notes:

The landscaped corridor and sidewalk are constructed by the developer and defined as a common lot with a pedestrian walkway easement and utility easement granted over the 5-foot sidewalk on subdivision map. Public easements will be required for streetlights, fire hydrants, etc., not located in the public right-of-way. They must be situated so as not to block the sidewalk. The equestrian trail path is constructed by the developer, defined as a separate lot, and deeded to the city. All areas are owned and maintained by a homeowner's association/private property owner, except **the equestrian trail path which is maintained by the City**. City maintenance shall consist of removal of debris and surface grading once every calendar year.

For protection from storm water, trees planted in the landscaped corridor adjacent to right-of-way must be secured by a decorative tree grate in stamped concrete.

Curbs consisting of a non-slippery material, e.g. rough concrete, should be provided to contain the surface material within the edges of the path. The path should have a cross slope, with no more than a two percent grade across the trail path directed toward the street or the direction of drainage flow, and a longitudinal grade with no more than a three-to-one slope; provided, however, short stretches of no more than 15 feet may be at two-to-one slopes.

Maintenance of the equestrian paths is very important, as large fragments of glass or other sharp objects may cut the “frog” area of the horses’ hooves. Trails maintenance and repair is the City’s responsibility.

The northwest part of the community has a number of “ranch estates” where horses are kept. Even more prevalent are ranch estates that are located in sections of rural Clark County outside the City, either in “county islands” or in areas that abut the City’s corporate boundary on one or more sides. Equestrian trails will not be provided or maintained by the City in areas located outside the corporate limits; however, several potential equestrian routes are planned through some areas of the City to connect with planned equestrian trails located outside the city. Other equestrian trail segments will be needed to connect to a proposed equestrian park to be located east of Floyd Lamb Park.

Most of these ranch estates do not have access to equestrian trails except through existing paved and unimproved roadways. Even though there is no City ordinance that prohibits equestrians from using roadways (or sidewalks), it is dangerous for equestrians to travel on roadways with vehicular traffic. Therefore, this plan designates several potential off-street equestrian trails to meet at least some of their needs.

Exhibit #2 shows the approved Clark County Area cross section for rural or non-urban streets that include a 24 foot wide paved surface and a drainage ditch within a varied width right-of-way. These streets do not have curb and gutter nor are sidewalks and street lights provided. The wide shoulder between the paved surface and right-of-way lines is available for use by equestrians. In most cases, these roadways provide the only means of access from the ranch estates to potential equestrian trails. . . . However, because of dust emission problems in Clark County, the shoulders will need to be provided with a dust palliative ground cover to control dust.

The question of whether streets in areas of ranch estates should be constructed to rural or urban standards within the city has been a contentious issue. The established ranch estates owners balk at the intrusion of urban development and the accompanying infrastructure of objectionable urban improvements. Street lighting, wide streets with curb and gutter, adjoining sidewalks, and perimeter landscaping alter the rural character to which they are accustomed and prevent them from riding their horses in these areas. Conversely, occupants of new housing developments are interested in the full complement of urban services.



Equestrian trail at Norco, California

If the City were to require the construction of streets with new developments to meet non-urban standards, the City may need to reconstruct them to meet urban standards if and when the frontages are developed for higher density or higher intensity uses or when traffic is sufficient to demonstrate a need for urban standards.

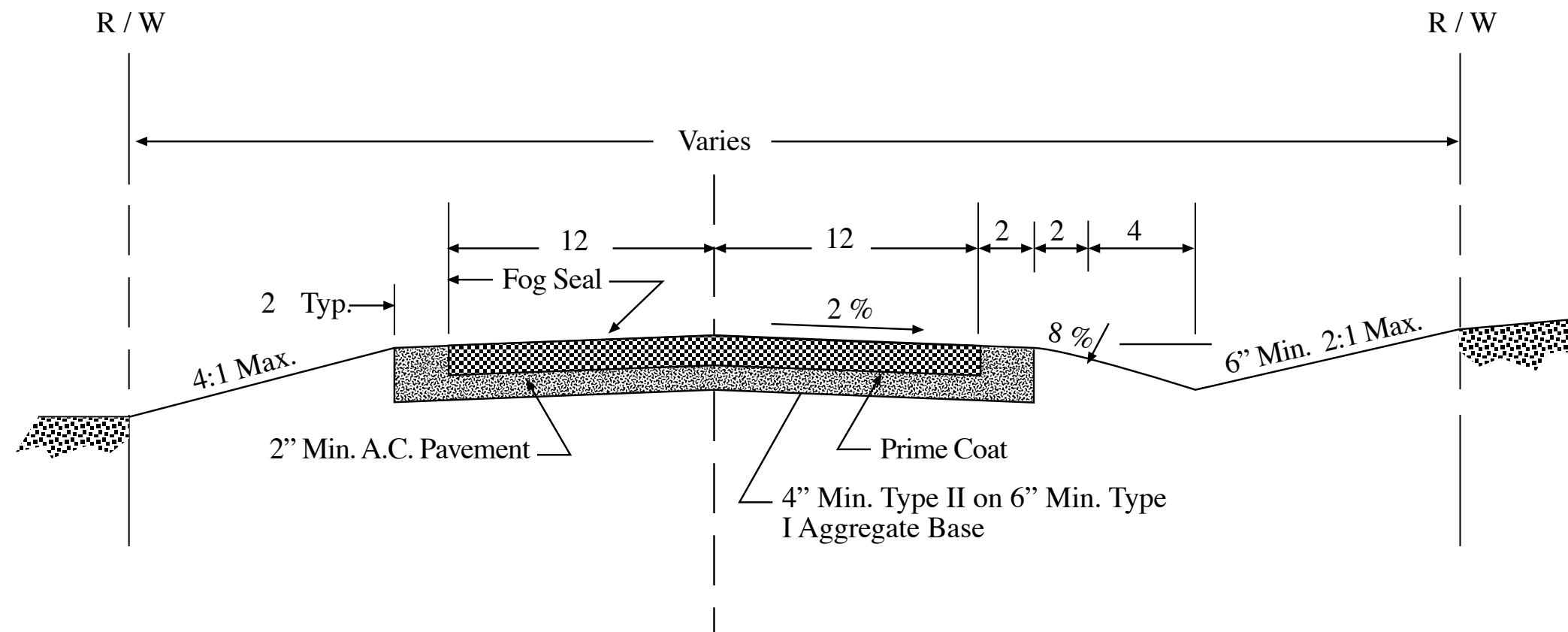
The cost for the reconstruction of streets to meet urban standards could be passed onto the property owners who would benefit. This could be done through the establishment of a “special improvement district” (SID) approved by more than 67 2/3 percent of the property owners affected. However, if the property owners are unwilling to support the establishment of an SID or if there is no benefit to the adjacent property owners, then the entire cost must be borne by the City. The cost to do so could result in the City expending millions of dollars in the future to reconstruct streets to meet urban standards.

When land is annexed to the city, it is usually annexed at the request of the landowners to gain access to urban facilities, particularly sanitary sewer service. Higher density and intensity development requires infrastructure that is adequate to support such development. The City does not have the financial resources to service and maintain infrastructure of a rural design which results in comparatively higher repair and maintenance costs. For this reason, the Trails Element recommends that all new developments have streets that meet urban design standards.

The City, however, has no control of development in rural Clark County. The County may wish to provide streets that meet rural standards in ranch estates areas for the benefit of equestrians. The equestrians may then gain access to the major trail routes by way of these rural streets. At such time as the ranch estates and other lands are annexed into the city and developed at higher densities, the streets could then be reconstructed to meet City standards by developers at no cost to the City.

Exhibit 2 Clark County Area Rural Cross- Section Street

Adopted January 16, 2002



MULTI-USE, EQUESTRIAN TRAILS

Multi-use, equestrian trails are the combination of multi-use transportation trails and equestrian trails. Although it is preferable to separate equestrian trails from other trails by locating equestrian trails along one side of a roadway and multi-use transportation trails along the other side, this is not always possible or as efficient. In these cases, both trails must be combined.

Exhibit #3 shows a typical multi-use, equestrian trail along a street that includes two separate bi-directional paths, one for equestrians. The total width of this trail is 35 feet. One path, with a 10-foot wide hard surface, is for pedestrian and bicycle use and located five feet from the street. The other path is for equestrians and is constructed of decomposed granite, a minimum of 7.5 feet wide. A barrier of irrigated landscaping and a fence separates the paths. Trees, as provided for multi-use, non-equestrian trails, are planted 20 feet on center within the irrigated landscaped area between the paths and along the street curb. Other amenities include benches and trash receptacles. Other details of this trail reflect those of multi-use transportation trails and the equestrian trails.

Where a multi-use transportation trail is combined with a recreation equestrian trail, each component shall be constructed, owned and maintained as if each component were separate.



TRAILS SYSTEM ALIGNMENTS

LOCATION CRITERIA

The previous chapter presented standards for recreation trails based on those standards recommended by nationally renowned trails organizations. This chapter addresses the location criteria for the trails system alignments and includes a map illustrating their proposed location.

Recreation trails are located or aligned to form a system for travel with linearity, continuity and accessibility being the principal factors involved. Accordingly, they should be located where uninterrupted corridors are available to provide long, continuous routes for recreation trips; within an independent right-of-way; where there is sufficient space or a physical divider; and where few streets and driveways intersect with the facility.

Trail crossings of streets should occur at controlled intersections. Mid-block crossings should be avoided wherever possible, especially in high traffic corridors, as crossing a street in traffic can be very dangerous. Where such crossings do occur, a traffic control signal should be provided.

Potential locations for recreation trails are identified along corridors and linear parks or greenways. Such corridors usually include ample right-of-way for the installation of trail paths in conjunction with perimeter landscaping and other amenities.

Recreation trails and pedestrian pathways enhance a given corridor and encourage increased use

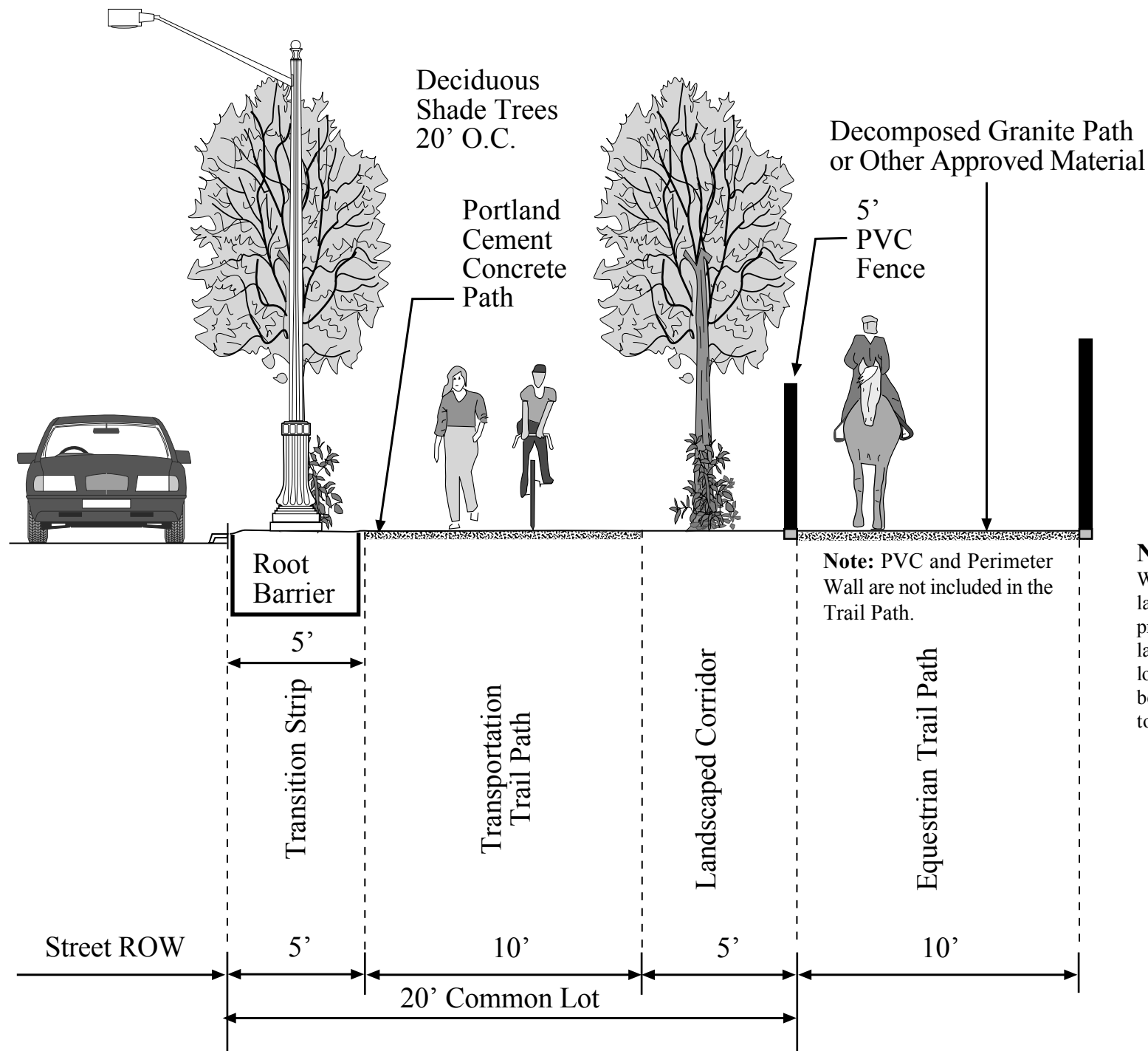
Recreation trails may be located in or next to arroyos or to drainage channels with the approval of the Clark County Regional Flood Control District (“District”). Most drainage channels are dedicated as rights-of-way or drainage easements and are under the control of the City of Las Vegas. Interest has also been expressed in improving the open drainage channels as landscaped greenways within which recreation trails could be located.

Greenways are very expensive to maintain, particularly following storm events, and with the Valley’s steeper terrain, in comparison to the cities of Phoenix and Scottsdale, Arizona, erosion protection of the channels is necessary. Although the City presently maintains the Pueblo Greenway, it is not protected.

While greenways can be attractive landscaped features, their use for a recreation trail system must also be evaluated in comparison to the expense, safety and other problems. The City should encourage greenways with recreation trails in master planned communities and in other locations where there are well-established homeowners associations willing to maintain them and where safety problems can be minimized.

Exhibit 3 Multi-Use Equestrian Trail

Approved by City Council
December 1, 2004

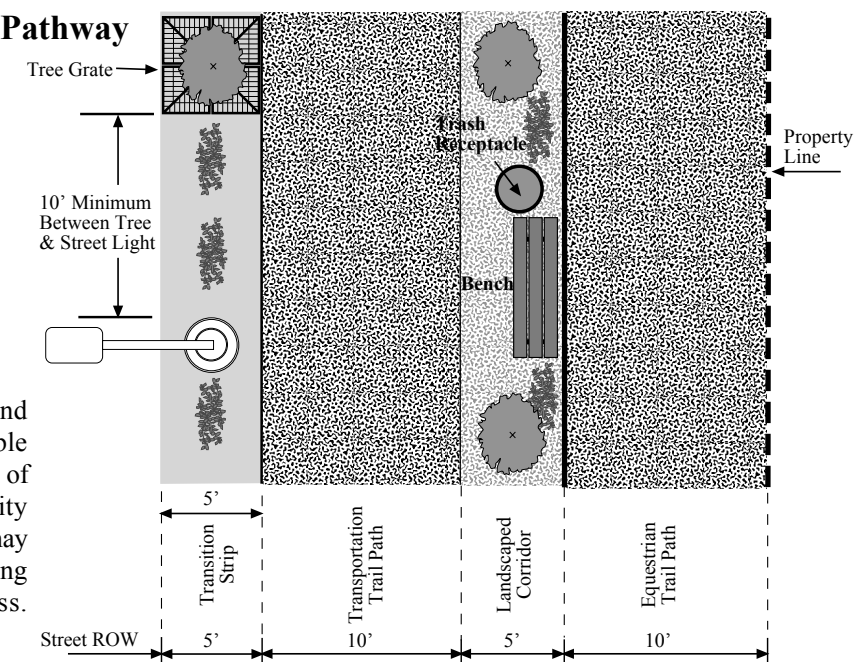


Notes:

The transition strip, transportation trail path, and landscaped corridor are constructed by the developer and defined as a common lot with a pedestrian walkway easement and utility easement granted over the 10-foot trail path on subdivision map. The equestrian trail path is constructed by the developer, defined as a separate lot, and deeded to the city. All areas are owned and maintained by a homeowner's association/private property owner, except the equestrian trail path which is maintained by the City. City maintenance shall consist of removal of debris and surface grading once every calendar year.

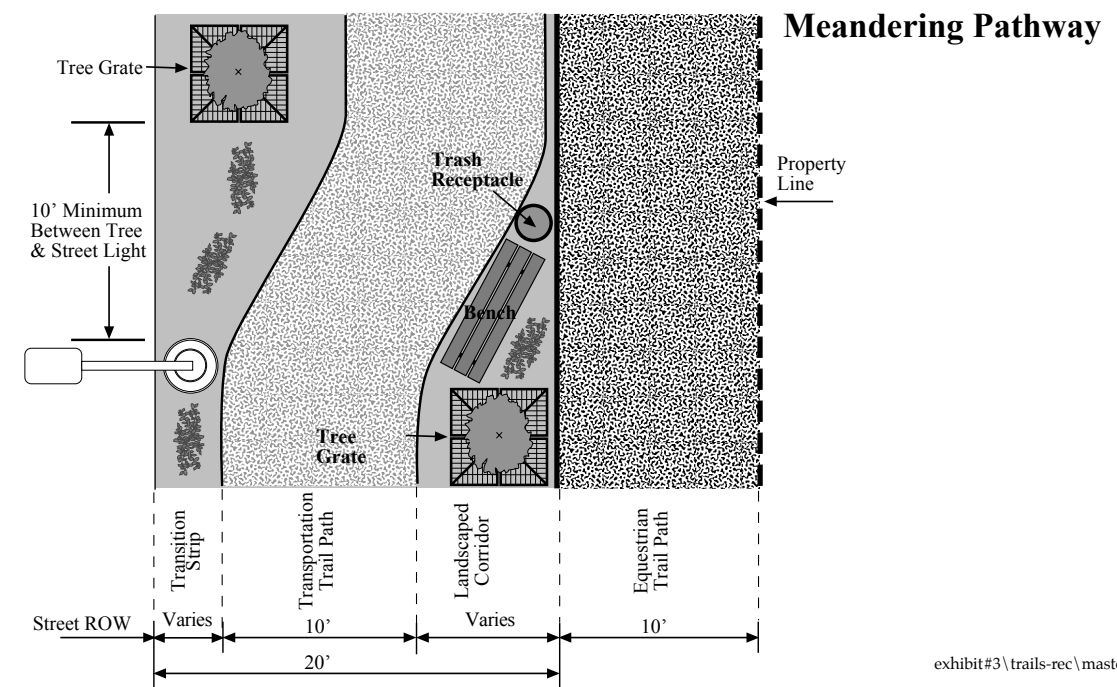
For protection from storm water, trees planted in the transition strip adjacent to right-of-way must be secured by a decorative tree grate in stamped concrete.

Standard Pathway



Note:

Within 20' common lot, trail and landscape design may be flexible provided that 10' of trail and 10' of landscape are provided. At utility locations decorative hardscape may be installed in lieu of landscaping to provide maintenance access.



TRAIL ALIGNMENTS

Based on the objectives and criteria and the trail classifications and standards of the previous chapters, a trails plan map of trail alignments has been formulated. Map #2, Off-Street Recreation Trail Alignments, shows the locations of multi-use, equestrian trails and equestrian trails. This map replaces Map #1 (Map #7 of the Centennial Hills Sector Plan).

One particular equestrian trail is shown extending south from the intersection of Alexander Road and Puli Drive, extended. The exact location of this trail should be sited to follow the toe of the mountain slope without interfering with development. This trail will enable equestrians to ride southwesterly through the area and beyond.

Map #3 shows the location of the proposed Pioneer's Trail, a non-equestrian recreation trail. This trail passes through 30 sites which show the historical progression of settlement in the Las Vegas Valley. The trail, which is six miles long and, for the most part, to be a five foot wide sidewalk, begins at the Las Vegas Springs Preserve and ends at the Old Mormon Fort. It passes through some of the earliest settlements of African Americans, Asian Americans, Hispanic Americans, Native Americans and White Americans. Although supported by the City, the Pioneer's Trail is not a project proposed or required by the City, so its establishment, ownership and maintenance, therefore, is relegated to others.

Where a direction for a trail is designated, the trail is to be provided along that direction of the street or trail corridor. Where no direction is noted, the appropriate side of the street or trail corridor shall be determined at the initial opportunity for development of the trail section.



TRAILHEADS

FACILITIES AND LOCATION

Some ranch estates with horses in the northwest part of the community do not have direct access to equestrian trails. It may be necessary to transport the horses to trailheads where they can be unloaded for riding. Such areas that serve as beginning or stop-off points for trails should be provided where necessary to serve trail users. Trailheads, as shown on Map #2, are proposed at an equestrian park to be located at the southeast corner of Grand Teton Drive and Bradley Road, on property located east of Floyd Lamb Park, at a site in Floyd Lamb Park, and in Lone Mountain Park which is located south of Lone Mountain Road and west of Grand Canyon Drive.

They should include at a minimum parking, trail information, rubbish containers and water and sanitary facilities.

Effective use of landscaping along the trail corridor

IDENTIFYING RECREATION TRAILS

Identifying recreation trails provides directional assistance to trail users and indicates to users the differences among alternative routes. To provide directional information, a standard “recreation trail” sign should be supplemented with arrow plates, names of routes, distances to destinations, etc.

ROUTE SIGNAGE

As discussed in the Manual on Uniform Traffic Control Devices (MUTCD), published by the Federal Highway Administration of the U.S. Department of Transportation, recreational trail signs designed to guide users to their destinations should be provided. As such, these guide signs should be placed at decision points along a trail and at trailheads to inform users of route direction changes and to confirm that route direction has been accurately comprehended.

To provide navigational information, supplemental plaques should be used to convey the distance to the desired destination and direction of travel. As desired or deemed appropriate, supplemental plaques may also be placed above or below these signs to identify a specific route by local name. It is also important to provide information on routes and facilities via the internet.

IMPLEMENTATION

PREVIOUS TRAILS ESTABLISHMENT

Most of the present trails have been established by developers in one of three ways. The first is by the establishment of “no-build” lots to be deeded to the City. No construction or maintenance has been required of the developer in such cases. Consequently, the lots have become eyesores to the neighborhood, since there is no funding mechanism in place to maintain the lots.

The second way trails have been established is with easements across individual lots. The developers have been responsible for their construction; however, because the trails are established as easements, the property owners whose properties they cross are responsible for their maintenance, including the irrigation of plant materials located within landscaped corridors. Trails that have been established outside of perimeter walls are not well maintained, if at all.

Map No. 2

City of Las Vegas

OFF-STREET RECREATION
TRAIL ALIGNMENTS

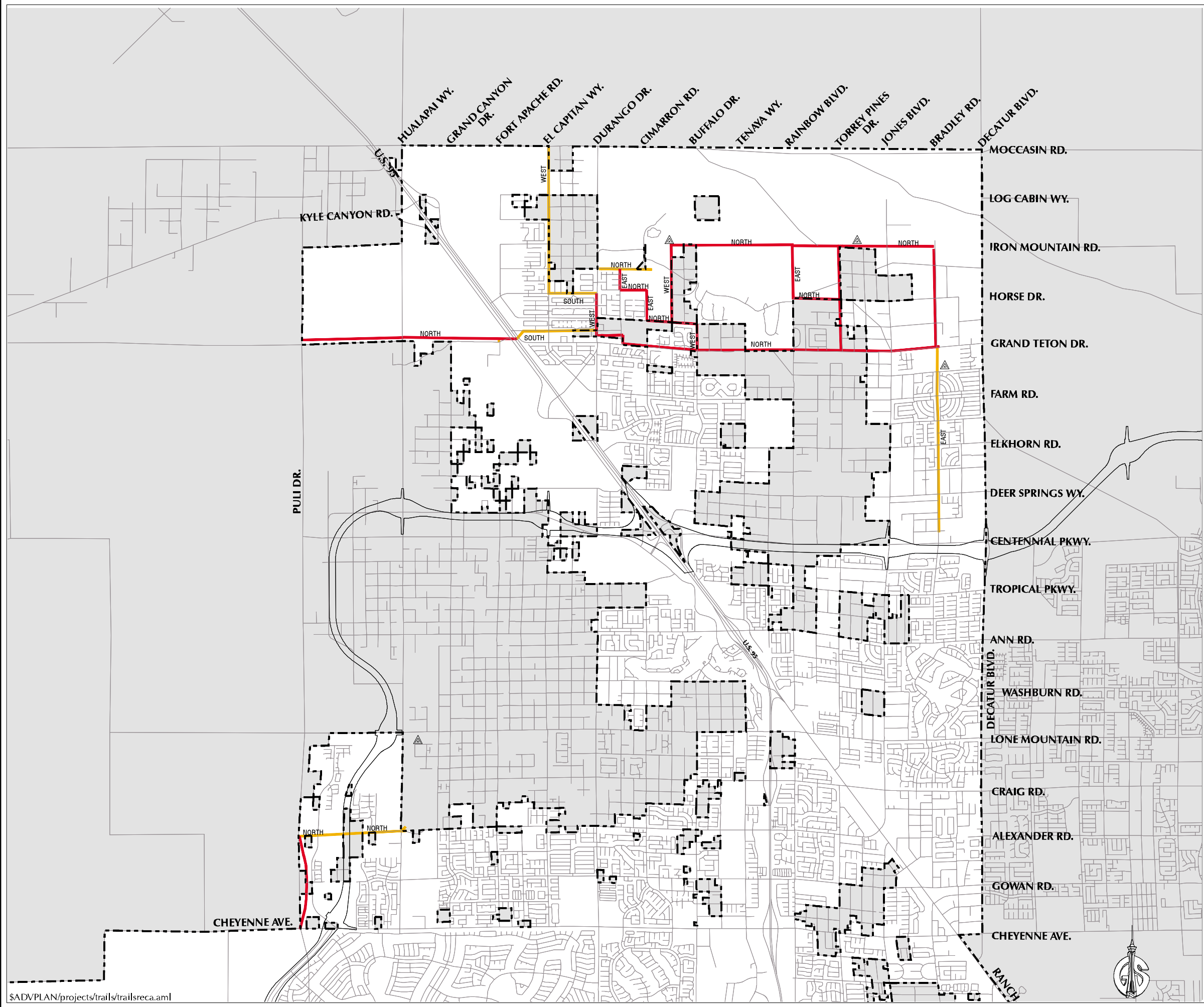
- Multi-Use, Equestrian Trail
- Equestrian Trail
- Trail Head

Adopted: January 16, 2002
Ordinance No. 5418

This map replaces Map No. 7 of the Centennial Hills Sector Plan.



Plotted: January 22, 2002
GIS maps are normally produced only to meet the needs of the City. Due to continuous development activity this map is for reference only.
Geographic Information System
Comprehensive Planning
702-229-6022



BACK OF MAP



Map No. 3

City of Las Vegas

PIONEER'S TRAIL



Pioneer's Trail

Adopted: January 16, 2002
Ordinance No. 5418

Plotted: January 23, 2002

GIS maps are normally produced only to meet the needs of the City. Due to continuous development activity this map is for reference only.

Geographic Information System

Comprehensive Planning
702-229-6022



PLANNING &
DEVELOPMENT
CITY OF LAS VEGAS
Development
Services Center



\$ADVPLAN/projects/trails/trailsrecb.aml

BACK OF MAP



The third way trails have been established is by having the trails subdivided as common lots to be perpetually maintained by homeowners associations or similar organizations of the developments in which they are located. The developer is responsible for their construction, including the installation of perimeter landscaping and its irrigation.

NEW TRAILS ESTABLISHMENT

Due to new legislation, the City will require that recreation trails identified in this Recreation Trails Element be constructed by developers with new developments. Those recreational trails required by the City are the responsibility of the City to own and maintain. However, recreation trails identified in this Element may be voluntarily owned and/or maintained by maintenance or homeowners associations established with developments.

Maintenance of the trails system primarily involves the removal of debris and the repair of trail components. The trail paths occasionally need to be scarified to avoid excessive compaction. Since the City has no equestrian trails which it now maintains, there are no cost figures for their maintenance. Other communities known to have equestrian trails, including Yuma, Tucson, and Scottsdale, Arizona and Albuquerque, New Mexico, were consulted. Their costs for the maintenance of equestrian trails varies considerably depending on how the trail is improved, but for trails that consist of crushed granite or similar material with a minimum amount of drought tolerant landscaping, the expense is “minimal.” One community official estimated it cost about \$100 per mile per year. The highest cost estimate reported by any community is an amount of approximately \$4,752 per mile per year. At an annual maintenance cost of \$4,752 per mile, approximately 7.8 miles of trails proposed in this Element would cost the City approximately \$37,000 per year to maintain.

The cost for the maintenance of equestrian trails can vary considerably depending on how the trail is improved, but for trails that consist of crushed granite or similar material with a minimum amount of drought tolerant landscaping, the expense is “minimal.” One community estimated it cost them about \$100 per mile per year. The highest cost estimate reported by any community is an amount of approximately \$2000 per mile per year.

The major trail segments illustrated on Map #2 account for a total of 11.5 miles of equestrian trails with 7.8 miles that would have to be owned and maintained by the City. The 7.8 miles of equestrian trails at an annual cost for maintenance of \$2000 per mile per year would cost the City a total estimated annual maintenance cost of \$15,600.

Based on the objectives and recommendations of the Recreation Trails Element, trails will be provided in conjunction with development by developers, except as otherwise discussed below. In addition, the ownership, maintenance and repair or replacement of the trails and trail segments will be as follows:



Developers choose to provide some minimal landscaping within the property reserved for trail paths

Table 1. Trail Costs

ITEM	COST/UNIT	EQUESTRIAN COST/100 FT. (20 FT. WIDTH)	MULTI-USE, EQUESTRIAN COST/100 FT. (35 FT. WIDTH)
Site Grubbing (8 in. depth)	\$8.00/cu. yd.	\$395.06	\$691.35
Landslaping Soil (4 in. depth)	\$12.00/cu. yd.	\$185.19	\$259.26
Grading (landscaped area)	\$0.07/sq. ft.	\$87.50	\$122.50
24 in. Box Trees	\$300.00	\$1,500.00	\$1,500.00
15 gal. Shrubs	\$85.00	\$850.00	\$850.00
5 gal. Shrubs	\$30.00	\$300.00	\$300.00
Irrigation Emitters	\$12.00	\$1,080.00	\$1,560.00
Pre-emergent Herbicide	\$0.03/sq. ft.	\$37.50	\$52.50
Decomposed Granite	\$0.45/sq.ft.	\$562.50	\$787.50
Stabilized Decomposed Granite	\$0.60/sq. ft.	\$750.00	\$1,050.00
Chat	\$0.125/sq. ft.	\$93.75	\$93.75
Portland Cement Concrete	\$3.50/sq. ft.	NA	\$3,500.00
Trash receptacle	\$500.00	NA	\$125.00
Bench	\$800.00	NA	\$200.00
Lighting, Pole & Fixture*	\$2,500.00	NA	\$1,650.00
Fence, PVC	\$5.00/ft.	<u>\$500.00</u>	<u>\$500.00</u>
Subtotal		\$6,431.50	\$13,241.86
Mobilization	Subtotal x 4%	\$253.66	\$529.67
Bonds and Insurance	Subtotal x 4%	\$253.66	\$529.67
Contractors' Overhead & Profit	Subtotal x 10%	\$634.15	\$1,324.19
Contingency	Subtotal x 10%	\$634.15	<u>\$1,324.19</u>
Total		\$8,117.12	\$16,949.58

* This cost would be reduced in those instances where backside luminaries are mounted on existing street lightpoles.

- Equestrian trails will be constructed by developers with developments.
- Equestrian trails will be deeded to the City as City owned land.
- Trails will be maintained and repaired by the City unless there is identified another organization to maintain them.

To complete segments of the trails system that provide continuity, the City may need to assume a larger responsibility for their establishment. The Architectural Services Section of the City Engineer Division has estimated the cost for the construction of equestrian trails meeting the trail standards in this Recreation Trails Element. These costs are shown in Table #1 and expressed in costs per 100 linear feet for equestrian trails. These figures do not include such items as trail signs for information and traffic control, electrical service, drinking fountains, telephone service, and hitch rails that may be needed on a case-by-case basis. Trail heads with vehicle and trailer parking, signage, information centers, sponsor material, maps, benches, shade, and hitching rails/posts are additional expenses that may be incorporated in parks that interconnect with the trail system.



Trails can create a buffer zone between potentially incompatible uses

FUNDING

The Finance and Business Services Department and its Treasury Division administer the funding sources required for any trails establishment and operations by the City. Trail revenue sources previously had been included with park revenue sources. Additional trail funding will need to be programmed from existing revenue sources and from potential new sources. Existing revenue sources primarily include bonds and the general fund. Alternative funding sources are discussed later.

FUNDING SOURCES

Recreation trails will be constructed by developers as new development occurs. However, where the City has an interest in completing trail sections, it can obtain funds for trails development, including acquisition and construction, from a range of sources. These revenue sources include the following:

GENERAL FUNDS

Some funds are made available for recreation purposes from moneys collected by way of general fund augmentation. These funds are City revenues generated from a variety of sources that have not been used for other purposes. It should be noted that these funds are limited and are subject to highly competing demands.

GENERAL OBLIGATION BONDS

General obligation bonds require the full faith and credit of the City, which necessitates approval by the voters at a general election. The bonds are repaid by an automatic lien on an identified existing revenue source.

GIFTS

Gifts of land or money designated for trails purposes are a source of funding, but such gifts are often fettered and restricted; contributions in return for the privilege of naming a trail to recognize a benefactor must follow approved City policy with respect to naming such facilities.

GRANTS

The Bureau of Land Management (BLM) has funds set aside for public parks purposes and trails. The Southern Nevada Public Lands Management Act of 1998 allows for money from the sale of BLM land to be expended for “. . . development of parks, trails, and natural areas in Clark County, Nevada, pursuant to a cooperative agreement with a unit of local government.” [Section 4(e)(3)(A)(iv)] This funding source is the most promising single source of funds available for trails construction.

The federal government has established several other programs that offer grants for trail development. The Transportation Equity Act for the 21st Century (TEA-21) establishes several funding programs for the construction of trails listed as follows:

- National Recreation Trails (RecTrails). The Federal Highway Administration administers this funding program. Funds from RecTrails are distributed to the Nevada Trails Program, established by the Division of State Parks, for recreation trails throughout the state in both rural and urban areas.
- Land and Water Conservation Fund Program provides 50:50 matching grants to states and through states to local governments for trails acquisition and development.
- Other grant sources include RTC Assistance funding that is available from regional offices of the National Park Service and Urban Resources Partnership funds, administered locally by the Clark County Conservation District.

FUND RAISERS

Fund raising is a potential source of funding that is generally used more for a specific trail development than land acquisition. Its availability, however, is limited and unreliable.

LAS VEGAS CONVENTION AND VISITORS' AUTHORITY

This agency provides a voluntary annual grant to the City that is used for parks and recreation opportunities. It should be noted that this is a voluntary contribution on the part of the Authority that is not a guaranteed amount.



Trail construction projects that have the potential for the greatest amount of usage and functionality should be the highest priority

PUBLIC/PRIVATE ARRANGEMENTS

It is recommended that public/private arrangements be encouraged, provided that free access to the facility or development in question is made available to the general public.

REVENUE BONDS (MEDIUM-TERM OR LONG-TERM)

Revenue bonds do not require voter approval since there is identified a dedicated revenue stream to repay them. The City recently approved a medium-term bond that is backed by a two percent property tax increase. This \$25 million bond will finance recreation improvements, new construction, and completion of construction of 11 separate recreation facilities. The bond is to be repaid within a 10-year horizon.

SPECIAL IMPROVEMENT DISTRICTS

With approval of more than 50 percent of the persons who benefit, a special improvement district could be established to finance the construction of trails.

TAX INCREASES

Tax increases provide a dedicated and immediate funding source. Tax increases, however, may only be imposed by a majority vote of the electorate.

USER'S GROUPS

Several groups have expressed interest in creating an "Adopt a Trail" program to help with the maintenance of trails. This could be done at little or no cost to the City.

USER FEES

User fees could be assessed to persons who are expected to benefit from use of the trails. Examples include: license fees for horses, similar to dog license fees and horse trailer fees.

Notes